

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
18 March 2004 (18.03.2004)

PCT

(10) International Publication Number
WO 2004/023114 A1

(51) International Patent Classification⁷: G01N 21/35, G01J 3/42, G01N 21/03, 21/39

(21) International Application Number:
PCT/US2002/028377

(22) International Filing Date:
6 September 2002 (06.09.2002)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): TDW DELAWARE, INC. [US/US]; Suite 780, 1100 Market Street, Wilmington, DE 19801 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): BOUNAIX, Fabrice, Marcel, S. [FR/FR]; 10 Rue Des Champs, F-67720 Hoerdt (FR).

(74) Agents: JOHNSON, Paul, H. et al.; Gable & Gotwals, 100 W. Fifth St., 10th Floor, Tulsa, OK 74103 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

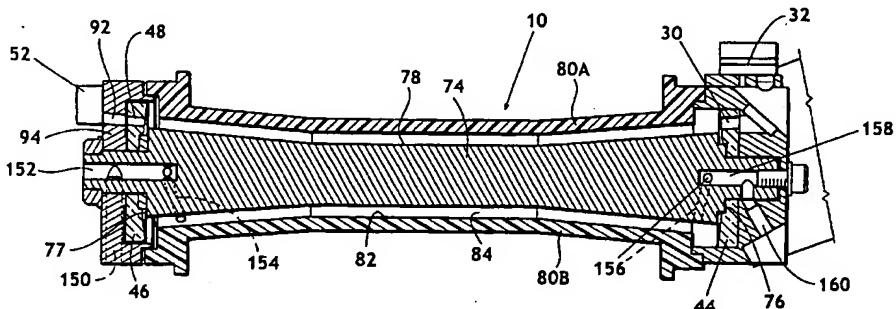
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND DEVICE FOR DETECTING GASES BY ABSORPTION SPECTROSCOPY



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(57) **Abstract:** A method and device for measuring a concentration of a preselected gas in a gas sample are disclosed. The device comprises a Herriott type multipass cell (10) having a center axle (74) and a housing (80A, 80B) surrounding and spaced from the axle to provide a tubular sample cavity (84). The gas sample is pumped through the sample cavity via apertures (154, 156) provided in opposed ends of the axle. A first mirror (44) and a second mirror (46) are supported at opposed ends of the axle. A light source, e.g. a laser or LED, is provided for emitting a light beam into the sample cavity via an entry aperture (30) in the first mirror, the light beam having a wave length at which the preselected gas strongly absorbs. The beam is reflected between the mirrors for a number of times before exiting the cell via an exit aperture (48) in the second mirror and impinging on a detector (52). The device further comprises a reference detector (32) for monitoring the intensity of the unattenuated light beam and a detector for detecting the intensity of light transmitted through the second mirror after a single pass through the cell. The light source is operatively connected to a heat control assembly having a heat sink and the gas sample is passed said heat sink to augment temperature control of the light source.